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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 21

Application Number: 09/419,005
Filing Date: October 13, 1999
Appellant(s): STIBEL, JEFFREY M.

Robert Greenspoon (Reg. No. 40,004)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12/29/03.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

Claims 14 and 20 have been canceled (not claims 4 and 20) in the amendment received on 9/24/02 (paper no. 12).

(4) *Status of Amendments After Final*

No amendment after final has been filed.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 1-13, 15-19, and 21-24 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

A substantially correct copy of appealed claim 14 appears on 3rd page of the Appendix to the appellant's brief. The minor errors are as follows: Claim 14 should be canceled. Claim 4 should be present as follows:

"4. A process according to claim 3, wherein providing said source of profile data includes providing subcategory information capable of being displayed to the user in response to the user selection of category and capable of providing information for refining the user search strategy."

(9) Prior Art of Record

6,256,633	DHARAP	7-2001
5,926,811	MILLER et al	7-1999
6,421,675	RYAN et al	7-2002

Ginsberg, Allen. "A unified approach to automatic indexing and information retrieval" IEEE, Vol. 8, Issue 5, Oct. 1993, pages 46-56)

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5, 6, 10, 11, 15, 17, 18, and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dharap (U.S. Patent No. 6,256,633) in view of Miller et al. (U.S. Patent No. 5,926,811).

With respect to claim 1, Dharap discloses presenting an interface to a user for collecting a user search request keyword from the user (lines 18-27 in col. 3). Dharap discloses analyzing the user search request to identify at least one meaning associated with the user search request (lines 15-56 in col. 2, lines 42-67 in col. 3, and lines 1-7 in col. 4). Dharap discloses processing the user search request and at least one meaning to generate an expanded search request, which includes related terms that are not defined or chosen by the user, represented as a boolean search strategy (lines 28-67 in col. 3, lines 1-7 and 58-67 in col. 4, and lines 1-17 in col. 5). Dharap discloses providing the expanded search request to search engine capable of identifying information associated with the expanded search request (lines 42-67 in col. 3 and lines 1-7 in col. 4). Dharap discloses a weighted topical dictionary (lines 8-32 in col. 4 and lines 52-53 in col. 3) in query expansion. And yet, Dharap does not explicitly disclose a use of

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weighted terms in detail. However, Miller discloses a use of a weighted term, which is associated with a concept or a meaning (lines 21-25 in col. 1, lines 7-13 in col. 2, line 63 in col. 3 thru line 8 in col. 4, lines 37-52 in col. 4, lines 25-32 in col. 5, and lines 32-35 in col. 9) for generating an expanded query and for ranking data of results. Therefore, based on Dharap in view of Miller, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a weight to a term associated with a meaning in Miller to the system of Dharap for ranking search results.

With respect to claim 5, Dharap discloses determining whether a plurality of meanings may be associated with the user search request (lines 15-42 in col. 2, lines 42-67 in col. 3, and lines 1-7 in col. 4).

With respect to claim 6, Dharap discloses matching a portion of the search request keyword to a linguistic database to identify a list of associated meanings (lines 42-67 in col. 3 and lines 1-32 in col. 4).

With respect to claim 10, Dharap discloses generating a user profile (a user linguistic database), which is separate from a dictionary/a thesaurus (the knowledgebase), containing keywords and associated user-defined meanings for the user (lines 15-42 in col. 2, lines 42-67 in col. 3, and lines 1-7 in col. 4).

With respect to claim 11, Dharap discloses accessing demographic information associated with the user for generating the expanded search request (lines 28-67 in col. 3, and lines 1-7 and 58-67 in col. 4, and lines 1-17 in col. 5).

With respect to claim 15, Dharap discloses a dictionary (a linguistic knowledgebase) having information representative of a list of sense signals describing a

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linguistic meaning and topically weighted (lines 42-67 in col. 3 and lines 1-32 in col. 4). Dharap discloses an interface to a user for collecting a user search request keyword from the user and accessing information from the dictionary (the linguistic knowledgebase) to generate an expanded search request (lines 18-67 in col. 3, lines 1-32 and 58-67 in col. 4, and lines 1-17 in col. 5). Dharap discloses processing the expanded search request to generate a boolean search request and providing the boolean search request to a search engine (lines 42-67 in col. 3 and lines 1-7 in col. 4). Dharap is silent on unweighted word in the list, weighting words in relation to a query term, and a set of boolean search requests to a set of search engines. However, Miller discloses weighting words in relation to a query term (abstract, lines 21-25 in col. 1, lines 7-13 in col. 2, line 63 in col. 3 thru line 8 in col. 4, lines 37-52 in col. 4, lines 25-32 in col. 5, and lines 32-35 in col. 9) for generating an expanded query and for ranking search results based on relevancy. Miller discloses filtering less relevant records, which are resulted based on words in the dictionary and query words. This less relevant records, records of 0 relevancy, teach unweighted words in the list. Miller discloses boolean search requests to search engines for the parallel processing (fig. 14, line 49 in col. 7 thru line 10 in col. 8, and lines 56-67 in col. 8). Therefore, based on Dharap in view of Miller, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize weighting words in relation to a query term in Miller to the system of Dharap in order to rank search results based on relevancy.

The limitations of claim 17 are rejected in the analysis above of claim 10, and the claim is rejected on that basis.

The limitations of claim 18 are rejected in the analysis above of claim 11, and the claim is rejected on that basis.

With respect to claim 21, Dharap discloses a NOT operator in associated with a related term in the expanded search (lines 18-67 in col. 3 and lines 1-7 in col. 4).

With respect to claim 22, Miller further discloses the related terms weighted in accordance with the relevance of the related terms to the search request and the meaning (abstract, lines 21-25 in col. 1, lines 7-13 in col. 2, lines 37-52 in col. 4, and lines 25-32 in col. 5). Therefore, the limitations of claim 22 are rejected in the analysis above of claim 1, and the claim is rejected on that basis.

With respect to claim 23, Miller further discloses boolean search requests are formatted in accordance with the search engines (lines 30-35 in col. 2, lines 63-67 in col. 3, lines 1-37 in col. 4, lines 48-56 and 65-67 in col. 5, lines 1-12 in col. 6, fig. 5, fig. 13, and fig. 14). Therefore, the limitations of claim 23 are rejected in the analysis above of claim 15, and the claim is rejected on that basis.

With respect to claim 24, Dharap is silent on merging search results. However, Miller discloses merging the search results from a multiple sources of data and ranking the search results based on relevancy (lines 30-34 in col. 2 and lines 21-67 in col. 6). Therefore, based on Dharap in view of Miller, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize merging and ranking search results in Miller to the system of Dharap for providing overall relevant search results in rank to the user.

3. Claims 2-4, 7-9, 12, 13, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dharap (U.S. Patent No. 6,256,633) in view of Miller et al. (U.S. Patent No. 5,926,811), and further in view of Ginsberg ("A unified approach to automatic indexing and information retrieval, IEEE, Oct. 1993, pages 46-56).

With respect to claim 2, Dharap and Miller are silent on providing a source of profile data representative of information. However, Ginsberg discloses a source of profile data representative of information (WorldLattice of Worldviews) that may be displayed to the user for guiding the user to supply information for refining the user search request (fig. 2 on page 48 and "Lattice-structured thesauri" section on pages 48-49). Therefore, based on Dharap in view of Miller, and further in view of Ginsberg, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize displaying a guidance of search by supplying information in Ginsberg to the system of Dharap for the search assistance purpose to the user.

With respect to claims 3 and 4, Ginsberg further discloses category information capable of being selected by the user to identify a topic associated with the user search strategy (fig. 2 on page 48 and "Overview of WorldViews" section on pages 47-48). Ginsberg discloses subcategory information capable of being displayed to the user in response to the user selection of category and capable of providing information for refining the user search strategy (fig. 2 on page 48). Therefore, the limitations of claims 3 and 4 are rejected in the analysis above of claim 2, and these claims are rejected on that basis.

With respect to claim 7, Dharap and Miller are silent on displaying a plurality of meaning associated with the search request keyword to the user. However, Ginsberg discloses generating a display that presents to the user a plurality of meanings associated with the keyphrase to aid the user in disambiguating between the plural meanings ("Query interpretation" section on pages 53-54 and fig. 5 on page 54). Therefore, based on Dharap in view of Miller, and further in view of Ginsberg, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize displaying a plurality of meanings associated with the search request keyword in Ginsberg to the system of Dharap for the search assistance purpose to the user.

With respect to claim 8, Dharap and Miller are silent on a menu of choices for meanings to the keyword. However, Ginsberg discloses generating a menu of choices that can be selected by the user to assign at least one of the associated meanings to the keyphrase (fig. 5 on page 54). Therefore, based on Dharap in view of Miller, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a menu of choices for meanings to the keyword in Ginsberg to the system of Dharap for the search assistance purpose of the user.

With respect to claim 9, Dharap and Miller are silent on adjusting the user interface as a function of the associated meaning. However, Ginsberg discloses adjusting the user interface as a function of the associated meaning to present to the user a request (a request for selection) for information for refining the user search request (fig. 2 on page 48 and fig. 5 on page 54). Therefore, based on Dharap in view

of Miller, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize adjusting the user interface as a function of the associated meaning in Ginsberg to the system of Dharap in order to assist a user in searching.

With respect to claim 12, Dharap discloses accessing a dictionary (a linguistic knowledgebase) having information of a list of sense signals for describing a linguistic meaning and a list of words (lines 42-67 in col. 3 and lines 1-7 in col. 4). Ginsberg also discloses accessing a lattice-structured thesaurus (a linguistic knowledgebase) having information representative of a list of sense signals (broader term (BT), narrower term (NT), related term (RT), generalization, and word senses) and a list of words ("Properties of lattice-structured thesauri" section on pages 48-49, fig. 4 on page 53, and "Information retrieval" section on pages 53-56).

With respect to claim 13, Dharap discloses accessing the user profile (the user linguistic database) and identifying a sense signal associated with the keyword (lines 42-67 in col. 3 and lines 1-7 in col. 4).

With respect to claim 16, Dharap and Miller are silent on adjusting the user interface as a function of information accessed from the linguistic database. However, Ginsberg discloses adjusting the interface, as a function of information accessed from the linguistic database, for guiding the user in disambiguating between meanings for the keyphrase ("Query interpretation" section on pages 53-54, fig. 2 on page 48, and fig. 5 on page 54). Therefore, based on Dharap in view of Miller, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize

adjusting the user interface as a function of information accessed from the linguistic database in Ginsberg to the system of Dharap in order to assist a user in searching.

4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dharap (U.S. Patent No. 6,256,633) in view of Miller et al. (U.S. Patent No. 5,926,811), and further in view of Ryan et al. (U.S. Patent No. 6,421,675).

With respect to claim 19, Dharap and Miller disclose the claimed subject matter as discussed above. Further, Miller discloses a signal, which can be other forms of the signal, for the indication purpose (lines 7-24 in col. 5). Dharap and Miller are silent on controlling a condition of use of words in the generation of the expanded search request. However, Ryan discloses a keyword eliminator feature that controls a condition of use of words in a query generation for the parental control of children use (lines 41-61 in col. 25 and fig. 15). Therefore, based on Dharap in view of Miller, and further in view of Ryan, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize controlling a condition of use of words in a query generation in Ryan to the system of Dharap in order to prevent the use of the words for the parental control.

(11) Response to Argument

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208

USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

As the applicant admitted on page 2, lines 13-15 and page 7, lines 8-9 of the appeal brief, Dharap discloses a query expansion, which automatically adds additional related terms to a search request and then processes the expanded phrase to retrieve records. Dharap discloses a use of a dictionary in query expansion (lines 52-53 in col. 3). Dharap discloses a weighted topical dictionary, which is utilized for detecting a context shift in order to interpret a search query, find a related topic, and provide related keywords to the search query for more relevant search result (lines 15-57 in col. 4 and lines 18-21 in col. 5). These teach that a dictionary is used in query expansion in Dharap. Dharap also discloses search results are ranked and a relative contribution of each keyword to each specific result is indicated by colored bar (lines 15-18 in col. 4). The relative contribution of each keyword to each specific result teaches there are differences in a degree of importance between keywords, wherein the keywords are used in a search query. In other words, it teaches a weight element between keywords. And yet, Dharap does not explicitly disclose a use of weighted terms in detail.

However, Miller discloses a use of weighted terms in query expansion. Furthermore, Miller discloses a use of a thesaurus in query expansion (lines 9-14 in col. 1), wherein the thesaurus is dynamically built (lines 53-60 in col. 1) and includes a collection of records containing weighted term relationships (lines 7-30 in col. 2). Miller discloses each record has terms assembled in indexed group, which inherently reflect a ranking based on relevance to an initial query (lines 61-63 in col. 1). Terms in each

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record are also grouped preferably into five groups based on term importance and the groups inherently reflect term weights for use in ranking the records during retrieval (lines 37-52 in col. 4).

The system of Miller in a big picture can be described via fig. 1 and line 63 in col. 3 thru line 8 in col. 4. Initially a user enters a search query including one or more terms. If the user specifies query expansion, the list (index) of terms to be used for expansion is constructed via accessing the thesaurus. Then the related concepts are displayed to the user and the user selects a concept to be included within the query. The query is then expanded to supplement the query (with query expansion term(s), lines 32-35 in col. 9). The terms in the constructed list (index) are ranked based on relevance (to the search query), which teaches a weight (lines 25-32 in col. 5, fig. 3, and fig. 4). Since a query expansion term is weighted and included in the search query, this, with broad interpretation, reads on the claim limitation of claim 1, which is "...the related terms being amended to the user search request and the one meaning in **a weighted string**".

The applicant argues that Miller uses the "results" of the initial query to build a dynamic statistical thesaurus. However, the examiner respectfully traverses. Miller builds the dynamic statistical thesaurus based on a **sampled source material (a sampling of documents**, lines 9-13 in col. 2, lines 53-57 in col. 4, and lines 44-48 in col. 7). After the query is expanded with query expansion terms by using the dynamically built statistical thesaurus, the search is performed for the actual search result.

The applicant argues that the examiner mistakenly states that Miller discloses the claimed weighting technique. However, the examiner respectfully traverses. The applicant's weighting technique is described as follows: "the weighting can be employed to indicate how significant the word is to the search, as well as for sorting through the returned hits, to rank the returned search results (see lines 10-13 of the indented section on page 3 of the appeal brief). Comparing to the applicant's weighting technique, Miller discloses each record has terms assembled in indexed group, which inherently reflect a ranking based on relevance to an initial query (lines 61-63 in col. 1). Terms in each record are also grouped preferably into five groups based on term importance and the groups inherently reflect term weights for use in ranking the records during retrieval (lines 37-52 in col. 4 and abstract). These teach how relevant or significant a term is to the query and ranking by using term weights. Again, as discussed above, a query expansion term is weighted and included in the query. This teaches "the related terms being amended to the user search request and the one meaning in **a weighted string**" based on broad interpretation. Thus, the applicant's argument is not persuasive.

The applicant argues that the examiner mistakenly applied another aspect of Miller to the limitation of claim 15 requiring submission of the expanded query through a plurality of search engines. However, the examiner respectfully traverses. Miller discloses a plurality of Search and Retrieval (SR) computers connected to document collection storages and to Session Administrator (SA) computers (fig. 14, line 49 in col. 7 thru line 10 in col. 8). Miller discloses a SA computer processing a search request

input by a user at a terminal and passing the search request to one or more SR computers that perform search and return results (lines 56-67 in col. 8). Such distribution process teaches a submission of the expanded query through a plurality of search engines. Therefore, Miller teaches the submission of the query through a plurality of search engines.

In response to applicant's argument for the limitations of claim 19 that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., flag signals help format expanded queries for the syntax of different search engines) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The limitations of claim 19 are related to a use of flag signals for a condition of use of words in the generation of the expanded search engine. As discussed above in the body of rejection for claim 19, Miller discloses a sign signal, which can be other forms of the signal, for the indication purpose (lines 7-24 in col. 5). Dharap and Miller are silent on controlling a condition of use of words in the generation of the expanded search request. However, Ryan discloses a keyword eliminator feature that controls a condition of use of words in a query generation for the parental control of children use (lines 41-61 in col. 25 and fig. 15). This keyword eliminator feature in a query generation teaches a flag signal for controlling a condition of use of words in the generation of the expanded search request. Therefore, based on Dharap in view of

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Miller, and further in view of Ryan, it would have been obvious to one having ordinary skill in the art at the time the invention was made to control a condition of use of words in a query generation in order to prevent the use of the words for the parental control.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Dharap discloses a query expansion, which automatically adds additional related terms to a search request and then processes the expanded phrase to retrieve records, but lacks a use of term weight in detail. However, Miller discloses a use of weighted terms in query expansion, wherein term weights are used for generating a more focused and relevant query and ranking the records during retrieval. Therefore, based on Dharap in view of Miller, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a weight to a term associated with a meaning for ranking data of search results. Furthermore, Ginsberg also discloses information retrieval by expanding a query with query expansion terms via a graphical user interface. The graphical user interface utilized in a query expansion in Ginsberg can be utilized to the system of Dharap in order to provide a user-friendly interface in expanding query to a user.

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"Test of obviousness is not whether features of secondary reference may be bodily incorporated into primary reference's structure, nor whether claimed invention is expressly suggested in any one or all of references; rather, **test is what combined teachings of references would have suggested to those of ordinary skill in art.**" In re Keller, Terry, and Davies, 208 USPQ 871 (CCPA 1981)

"Reason, suggestion, or **motivation to combine two or more prior art references** in single invention **may come from references themselves**, from **knowledge of those skilled in art** that certain references or disclosures in references are known to be of interest in particular field, or from **nature of problem to be solved;**" Pro-Mold and Tool Co. v. Great Lakes Plastics Inc. U.S. Court of Appeals Federal Circuit 37 USPQ2d 1626 Decided February 7, 1996 Nos. 95-1171, -1181


"Prima facie case of obviousness is established when **teachings of prior art appear to suggest claimed subject matter to person of ordinary skill in art**; it is incumbent upon applicant to go forward with objective evidence of obviousness once prima facie case is established." In re Rinehart (CCPA) 189 USPQ 143 Decided Mar. 11, 1976, No. 75-608 U.S. Court of Customs and Patent Appeals"

For the above reasons, it is believed that the rejections should be sustained.

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Respectfully submitted,

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March 5, 2004

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